

### REMARKS

At the outset, the Examiner is thanked for the thorough review and consideration of the pending application. The Final Office Action dated May 18, 2005 has been received and its contents carefully reviewed. Applicants appreciate the Examiner's withdrawal of the claim objections.

Claims 1 and 32 are hereby amended. Claims 20-31 are withdrawn from consideration. Claims 1-50 are pending. Reexamination and reconsideration of the pending claims are respectfully requested.

In the Office Action, claims 1-19 and 32-50 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,517,342 to Kim et al. (hereinafter "Kim") in view of U.S. Patent No. 6,770,908 to Sato (hereinafter "Sato").

The rejection of claims 1-19 and 32-50 as being unpatentable over Kim in view of Sato is respectfully traversed and reconsideration is requested.

Claim 1 is allowable over Kim in view of Sato in that claim 1 recites a combination of elements including, for example, "a plurality of gate lines arranged along a second direction perpendicular to the first direction on the substrate to define a plurality of pixel regions, each of the gate lines having at least one first set of protrusions and depressions extending in a direction substantially perpendicular to a surface of the substrate on which the gate lines are arranged." None of the cited references, singly or in combination, teaches or suggests at least these features of the claimed invention. The Examiner states at pages 5-6 of the Final Office Action that Kim teaches "each of the gate lines has at least one first set of protrusions and depressions (fig. 1, ref. 10) extending with respect to a thickness direction of the substrate." However, the device of present claim 1 is different from the modified device of Kim in that "each of the gate lines" have "at least one first set of protrusions and depressions" and in that the "protrusions and depressions" extend "in a direction substantially perpendicular to a surface of the substrate." In contrast, Kim merely teaches that the first electrodes 10 are formed as tab-like portions projected into a respective pixel portion. See column 2, lines 38-42 and Figure 1. Figure 1 does not show that first electrodes 10 are "protrusions and depressions" for the "gate lines." Furthermore,

Figure 1 of Kim shows first electrodes 10 are disposed to extend parallel to the substrate surface. Therefore, Kim does not teach “each of the gate lines having at least one first set of protrusions and depressions extending in a direction substantially perpendicular to a surface of the substrate on which the gate lines are arranged.”

Sato does not cure these deficiencies of Kim. In addition, Applicants respectfully submits that there is no motivation for one of ordinary skill in the art to combine the cited references and arrive at the claimed invention with any reasonable expectation of success. Sato is completely silent with regard to “gate lines having at least one first set of protrusions and depressions.” Applicants further respectfully submit that the motivation to combine the references comes from the present invention and not from the cited references, which is impermissible. Accordingly, Applicant respectfully submits that claim 1 and claims 2-19, which depend therefrom, are allowable over the cited references.

Claim 32 is allowable over Kim in view of Sato in that claim 32 recites a combination of elements including, for example, “forming a plurality of gate lines arranged along a second direction perpendicular to the first direction on the substrate to define a plurality of pixel regions, each of the gate lines having at least one first set of protrusions and depressions extending in a direction substantially perpendicular to a surface of the substrate on which the gate lines are arranged.” None of the cited references, singly or in combination, teaches or suggests at least these features of the claimed invention. The Examiner states at pages 5-6 of the Final Office Action that Kim teaches “each of the gate lines has at least one first set of protrusions and depressions (fig. 1, ref. 10) extending with respect to a thickness direction of the substrate.” However, the method of present claim 32 is different from Kim in view of Sato in that “each of the gate lines” have “at least one first set of protrusions and depressions” and in that the “protrusions and depressions” extend “in a direction substantially perpendicular to a surface of the substrate.” In contrast, Kim merely teaches that the first electrodes 10 are formed as tab-like portions projected into a respective pixel portion. See column 2, lines 38-42 and Figure 1. Figure 1 does not show that first electrodes 10 are “protrusions and depressions” for the “gate lines.” Furthermore, Figure 1 of Kim shows first electrodes 10 are disposed to extend parallel to the substrate surface. Therefore, Kim does not teach “each of the gate lines having at least one

first set of protrusions and depressions extending in a direction substantially perpendicular to a surface of the substrate on which the gate lines are arranged.”

Sato does not cure these deficiencies of Kim. In addition, Applicants respectfully submits that there is no motivation for one of ordinary skill in the art to combine the cited references and arrive at the claimed invention with any reasonable expectation of success. Sato is completely silent with regard to “gate lines having at least one first set of protrusions and depressions.” Applicants further respectfully submit that the motivation to combine the references comes from the present invention and not from the cited references, which is impermissible. Accordingly, Applicant respectfully submits that claim 32 and claims 33-50, which depend therefrom, are allowable over the cited references.

Applicants believe the foregoing amendments place the application in condition for allowance and early, favorable action is respectfully solicited.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at (202) 496-7500 to discuss the steps necessary for placing the application in condition for allowance. All correspondence should continue to be sent to the below-listed address.

If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. §1.136, and any additional fees required under 37 C.F.R. §1.136 for any necessary extension of time, or any other fees required to complete the filing of this response, may be charged to Deposit Account No. 50-0911. Please credit any overpayment to deposit Account No. 50-0911. A duplicate copy of this sheet is enclosed.

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Reply to Office Action dated May 18, 2005

Docket No.: 8734.209.00

The undersigned hereby signs this filing under the authority provided by 37 C.F.R.  
§1.34 pending the filing of a Power of Attorney and Statement under 3.73(b) executed by  
Assignee.

Dated: September 16, 2005

Respectfully submitted,

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